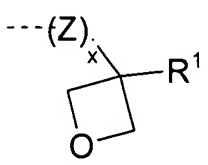
AMENDMENTS TO THE CLAIMS

1. (Currently amended) Process for crosslinking oxetane-functionalised, organic semiconductors and conductors which comprises initiating by irradiation in the presence of at least one added onium compound ~~and by irradiation, characterised in that~~ wherein the irradiation is carried out outside the absorption band of the onium compound.

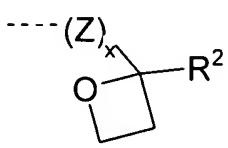
2. (Currently amended) Process according to Claim 1, ~~characterised in that~~ wherein the irradiation is carried out at a wavelength at least 100 nm longer than the absorption maximum of the onium compound.

3. (Currently amended) Process according to Claim 1 ~~and/or 2~~, ~~characterised in that~~ wherein the organic semiconductor or conductor is oligomeric or polymeric.

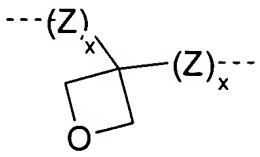
4. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 3~~, ~~characterised in that~~ wherein at least one H atom in the organic semiconductor or conductor has been replaced by a group of the formula (1), formula (2), formula (3) or formula (4)



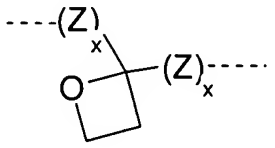
Formula (1)



Formula (2)



Formula (3)



Formula (4)

where the following applies to the symbols and indices used:

R^1 is on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl, alkoxyalkyl, alkoxy or thioalkoxy group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 18 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally ~~may be~~ replaced by a halogen ~~halogen~~ or CN and one or more non-adjacent C atoms is optionally ~~may be~~ replaced by -O-, -S-, -CO-, -COO-, -O-CO-,

R^2 is on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl or alkoxyalkyl group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 18 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally ~~may be~~ replaced by a halogen ~~halogen~~ or CN and one or more non-adjacent C atoms is optionally ~~may be~~ replaced by -O-, -S-, -CO-, -COO-, -O-CO-,

Z is on each occurrence, identically or differently, a divalent group $-(CR^3R^4)_n-$, in which, in addition, one or more non-adjacent C atoms is optionally ~~may be~~ replaced by -O-, -S-, -CO-, -COO- or -O-CO-,
or a divalent aryl and/or N-, S- and/or O-heteroaryl group having 4 to 40 C atoms, which is optionally ~~may also be~~ substituted by one or more radicals R^3,

~~R^3, R^4~~ R^3 and R^4 are on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl, alkoxy, alkoxyalkyl or thioalkoxy group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 20 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally ~~may also be~~ replaced by a halogen or CN; radicals R^3 or R^4 here ~~may also~~ optionally form a ring system with one another or with R^1 or R^2,

n is on each occurrence, identically or differently, an integer between 0 and 30,

x is on each occurrence, identically or differently, an integer between 0 and 5,

wherein ~~with the proviso that~~ the number of ~~these~~ the groups of the formula (1) or formula (2) is limited by the maximum number of available H atoms of the organic semiconductor or conductor; the dashed bond ~~here~~ indicates the link to the organic semiconductor.

5. (Currently amended) Process according to Claim 4, ~~characterised in that~~ wherein at least one H atom in the organic semiconductor or conductor has been replaced by a group of the formula (1) ~~according to Claim 4~~.

6. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 5~~, ~~characterised in that~~ wherein the organic semiconductor has charge-transport properties, ~~and/or~~

emission properties, ~~and/~~or blocking properties or a combination of charge-transport properties, emission properties and blocking properties.

7. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 6, characterised in that~~ wherein the onium compound employed ~~is~~ comprises at least one diaryliodonium, diarylbromonium, diarylchloronium or triarylsulfonium salt.

8. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 7, characterised in that~~ wherein the proportion of the onium compound in the mixture ~~or in the layer~~ is between 0.01 and 5% by weight.

9. (Currently amended) Process according to Claim 8, ~~characterised in that~~ wherein the proportion of the onium compound in the mixture ~~or in the layer~~ is between 0.1 and 2% by weight.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

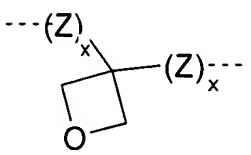
15. (Currently amended) Process according to Claim 14, ~~characterised in that~~ wherein at least one reducing agent and/or at least one weak base or ~~a nucleophile~~ nucleophile is added to the solvent.

16. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 15, characterised in that~~ wherein the irradiation is carried out at a wavelength in the region of up to +/- 50 nm of the absorption maximum of the ~~respective~~ absorption band of the organic semiconductor.

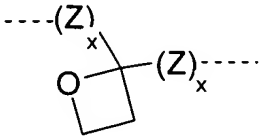
17. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 20, characterised in that~~ wherein the duration of the irradiation is between 0.01 and 10 seconds at a light intensity of < 1 mW/cm^2.

18. (Currently amended) Process according to Claim 1 ~~one or more of Claims 1 to 17, characterised in that,~~ wherein in addition to the crosslinking, doping of the layer ~~is produced~~ occurs at the same time by incompletely conditioning and/or rinsing the layer after the irradiation.

19. (Original) Compounds of the formula (3) and formula (4)



Formula (3)



Formula (4)

~~where the symbols and indices used have the same meaning as described under Claim 4.~~

where the following applies to the symbols and indices used:

R^1 is on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl, alkoxyalkyl, alkoxy or thioalkoxy group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 18 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally replaced by a halogen or CN and one or more non-adjacent C atoms is optionally replaced by -O-, -S-, -CO-, -COO-, -O-CO-,

R^2 is on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl or alkoxyalkyl group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 18 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally replaced by a halogen or CN and one or more non-adjacent C atoms is optionally replaced by -O-, -S-, -CO-, -COO-, -O-CO-,

Z is on each occurrence, identically or differently, a divalent group $-(CR^3R^4)_n-$, in which, in addition, one or more non-adjacent C atoms is optionally replaced by -O-, -S-, -CO-, -COO- or -O-CO-,
or a divalent aryl and/or N-, S- and/or O-heteroaryl group having 4 to 40 C atoms, which is optionally substituted by one or more radicals R^3,

R^3 and R^4 are on each occurrence, identically or differently, hydrogen, a straight-chain, branched or cyclic alkyl, alkoxy, alkoxyalkyl or thioalkoxy group having 1 to 20 C atoms, an aryl or heteroaryl group having 4 to 20 aromatic ring atoms or an alkenyl group having 2 to 10 C atoms, in which one or more hydrogen atoms is optionally replaced by a halogen or CN; radicals R^3 or R^4 here optionally form a ring system with one another or with R^1 or R^2,

n is on each occurrence, identically or differently, an integer between 0 and 30,

x is on each occurrence, identically or differently, an integer between 0 and 5,

wherein the number of the groups of the formula (1) or formula (2) is limited by the maximum number of available H atoms of the organic semiconductor or conductor; the dashed bond indicates the link to the organic semiconductor.

20. (Currently amended) Process for crosslinking and optionally simultaneous doping of oxetane-containing organic semiconductors, ~~characterised in that~~ which comprises adding at least one oxidant ~~is added~~ to ~~the crosslinking~~ a crosslinking reaction.

21. (Currently amended) Process for the photosensitised doping of organic semiconductors or conductors by photoacids, ~~characterised in that the~~ which comprises carrying out irradiation ~~is carried out~~ outside the absorption band of the photoacid.

22. (Currently amended) Organic semiconducting layers[[,]] ~~characterised in that they~~ which have been produced by ~~a process~~ the process according to Claim 1 ~~one or more of Claims 1 to 21~~.

23. (Cancelled)

24. (Currently amended) Organic electronic device~~, characterised in that it comprises~~ comprising at least one layer produced by ~~a process~~ the process according to Claim 1 ~~one or more of Claims 1 to 21~~.

25. (Currently amended) Organic electronic device according to Claim 24, ~~characterised in that~~ wherein ~~it is~~ the device is an ~~organic or polymeric light-emitting diodes (OLEDs, PLEDs), organic solar cells (O-SCs), organic field-effect transistors (O-FETs), organic thin-film transistors (O-TFTs), organic integrated circuits (O-ICs), organic optical amplifiers or organic laser diodes (O-lasers)~~ organic or polymeric light-emitting diode (OLED, PLED), organic solar cell (O-SC), organic field-effect transistor (O-FET), organic thin-film transistor (O-TFT), organic integrated circuit (O-IC), organic optical amplifier or organic laser diode (O-laser).

26. (New) Process according to Claim 20 wherein doping of the oxetane-containing organic semiconductors occurs simultaneously with the crosslinking of said semiconductors.

27. (New) A process to produce a semiconductor layer which comprises crosslinking a layer according to the process of Claim 1.

28. (New) Process according to Claim 27, wherein the layer is post-treated after the irradiation.

29. (New) Process according to Claim 27, wherein the layer is conditioned after the irradiation.

30. (New) Process according to Claim 27, wherein the layer is conditioned in a temperature range from between 50 and 250°C.

31. (New) Process according to Claim 29, wherein the layer is conditioned for between 0.1 and 10 minutes.

32. (New) Process according to Claim 27 wherein the layer is rinsed with a solvent after irradiation.

33. (New) Process according to Claim 32, wherein at least one reducing agent and/or at least one weak base or nucleophile is added to the solvent.